HIGH TEMPERATURE SUPERCONDUCTIVITY
BRINGING NEW POWER TO ELECTRICITY

NEWS UPDATE
8 June 2001

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Note: Due to the time-sensitive nature of these news items, we are issuing this Superconductivity News Update just one week after our May 31st edition. Future issues of this newsletter will revert to a less-frequent schedule once again.

DEPARTMENT OF ENERGY REVIEW OF ENERGY EFFICIENCY AND RENEWABLE ENERGY PROGRAMS
—Review to Include Superconductivity Program; Public Comments Invited

The U.S. Department of Energy (DOE) has initiated strategic reviews of its research and development programs in both energy efficiency and renewable energy. The reviews were recommended in President Bush's National Energy Policy (see Superconductivity News Update of 31 May 2001), and were among the first steps taken by DOE to implement the policy. The President's energy policy recommended a review of the current funding and historic performance of these programs, and based on the reviews, Secretary of Energy Spencer Abraham will propose appropriate funding of those programs that are found to be performance-based and are modeled as public-private partnerships. The reviews are scheduled to be completed by September 1st.

The DOE's Office of Energy Efficiency and Renewable Energy (EERE) funds research, development, demonstration and deployment (RDD&D) of affordable, advanced energy technologies and practices. This effort is incorporated into 31 programs and organized around five energy sectors—(1) buildings, (2) industry, (3) transportation, (4) power generation and delivery, and (5) Federal government facilities.

As part of the reviews of these programs, DOE is seeking public input regarding the objectives and achievements of the current programs, suggested objectives for future programs, and implementation of current and future programs. DOE will hold daylong public meetings in June in the cities of Atlanta, Boston, Chicago, Denver, Philadelphia, Seattle, and Washington, D.C.

Public meetings will be held in the following cities from 9:00 a.m. to 9:00 p.m. From 9:00 to 10:00 at each meeting, the Department will receive comments from public officials only:

June 12
Atlanta, Georgia
Location: Main Auditorium (Lower Level), Richard B. Russell Federal Building and Courthouse, 75 Spring Street SW, Atlanta

June 12
Chicago, Illinois
Location: James Benton Parson Memorial Court Room, Dirksen Federal Building, Room 2525, 219 South Dearborn Street, Chicago

June 19
Boston, Massachusetts
Location: John A. Volpe National Transportation Systems Center, 55 Broadway, Kendall Square, Cambridge

June 19
Seattle, Washington
Location: Bell Harbor International Conference Center, International Promenade Room, Pier 66, 2211 Alaskan Way, Seattle

June 21
Denver, Colorado
Location: Adam's Mark Hotel Denver, 1550 Court Place Denver

June 21
Philadelphia, Pennsylvania
Location: Myerson Auditorium, 210 South 34th Street, Philadelphia

June 26
Washington, D. C.
Location: Washington Hilton and Towers, 1919 Connecticut Avenue, Washington

To accommodate as many individuals as possible, each speaker will be limited to five minutes. In the event that time does not permit all individuals who would like to comment, several other options are available to receive public input. Forms will be available at each location to provide hand-written comments.

Written comments will be accepted and must be submitted to the Department of Energy no later than 5:00 p.m. EDT, June 29, 2001. Comments should address: (1) the objectives of the current energy efficiency and renewable energy research, development, demonstration and deployment programs, (2) suggested potential objectives for future programs, (3) implementation of current and future programs, and (4) whether these Federal programs are achieving intended objectives. Written comments should be no more than four single spaced pages, using 12 pitch font and 1 inch margins. All written comments will be included in the proceedings of the seven public meetings.

The Department of Energy also invites its federal partners to submit written comments. Comments may be sent to: Ms. Bonny Overton, U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, EE 3.1, 1000 Independence Avenue, S.W., Washington, D.C. 20585, or e-mail to EERENEP.comments@ee.doe.gov.

For more details on these public meetings, visit www.eren.doe.gov/eere/publicmeetings.html.

Copies of the National Energy Plan can be viewed at www.energy.gov/HQPress/releases01/maypr/energy_policy.htm. [▲ BACK TO TOP]

IGC-SUPERPOWER SECURES EXCLUSIVE LICENSES FROM LOS ALAMOS NATIONAL LABORATORY

—Licenses Include Core Technology for Second-Generation HTS Material And Fault Current Controller System Design; Company also Signs $1.8 Million Contract With Argonne National Laboratory to Accelerate Improvements in High-Temperature Superconductor Production Process

Intermagnetics General Corporation announced last week that its wholly owned subsidiary, IGC-SuperPower, has signed agreements with Los Alamos National Laboratory granting it worldwide exclusive licenses to patents and applications related to manufacturing second-generation high-temperature superconductors. SuperPower also received an exclusive license to technology related to fault current controller systems. Additionally, SuperPower received exclusive rights to sublicense any of these technologies.

IGC-SuperPower technicians manufacture second-generation coated conductors in state-of-the-art clean rooms at the company's facilities in Schenectady, N.Y

Separately, IGC-SuperPower also announced a $1.8 million collaborative development agreement with Argonne National Laboratory to accelerate technological advances in manufacturing cost-effective, second-generation coated superconductors. Under

terms of the new two-year agreement, Argonne will assist and contribute its materials characterization capabilities, such as the Advanced Photon Source, to IGC-SuperPower in scaling up the second-generation HTS fabrication processes to commercial manufacturing levels.

"These agreements represent an extension of the technology transfer agreement we and the two national laboratories announced slightly over a year ago and include know-how and further refinements to the manufacturing process developed by Los Alamos for second-generation material," said Glenn H. Epstein, president and chief executive officer of Intermagnetics. "We believe this will prove to be the best method of cost-effective continuous production of high performance HTS material for use in the electric power industry."

From left to right, Deputy Assistant Secretary of the US Department of Energy Robert Dixon, New York State Assemblyman Paul Tonko, U.S. Senator Charles Schumer (D-N.Y.), IGC-SuperPower's General Manager Pradeep Haldar, Argonne National Laboratory's U. Balachandran, IGC-SuperPower CEO, Glenn Epstein, and Los Alamos National Laboratory's Dean Peterson celebrate the company's first anniversary and the signing of agreements with Los Alamos and Argonne National Laboratories.

U.S. Sen. Charles E. Schumer (D-N.Y.), a strong proponent of advancing superconducting technology as a means of easing the strain on the U.S. power grid (see Superconductivity News Update of 31 May 2001), added: "We are at the precipice of an energy crisis and using new superconducting technology to increase electricity transmission capacity, reliability and quality on existing power lines is a critical component to overcome this energy supply problem. These new agreements should help IGC-SuperPower to bring superconductors to market sooner."

IGC-SuperPower L.L.C., was formed about a year ago to build upon the Los Alamos and Argonne technology, technology licensed from Lucent Technologies and Intermagnetics' 30 years of experience in developing low- and high-temperature superconducting material and devices. The company's goal is to commercialize HTS devices designed to provide more efficient and reliable means of transmitting and distributing electric power.

IGC-SuperPower and several industry and research partners have demonstrated the technical feasibility of HTS devices such as transformers, fault current controllers and cables in more efficiently delivering electric power. The technology transfer and subsequent exclusive licenses are key to making the devices commercially viable.

Los Alamos National Laboratory is operated by the University of California for the U.S. Department of Energy's National Nuclear Security Administration (DOE's NNSA), and Argonne National Laboratory is operated by the University of Chicago for DOE. The

DOE Superconductivity Centers at both of these institutions receive support from the DOE's Office of Energy Efficiency and Renewable Energy, Office of Power Technologies.

[from company news release at http://biz.yahoo.com/prnews/010529/sftu075.html]

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JULY CONFERENCE IN WISCONSIN TO FEATURE PROGRESS IN CRYOGENICS AND SUPERCONDUCTIVITY

—CEC-ICMC 2001 to take place July 16–20, 2001 in Madison

The 2001 Cryogenic Engineering Conference (CEC) and International Cryogenic Materials Conference (ICMC) will be held July 16-20, 2001 in Madison, Wisconsin, USA at the Monona Terrace Community and Convention Center. The conference theme is "Cryogenics in the Wright Place" (the Monona Terrace Community and Convention Center was designed by one of the world's premier architects, Frank Lloyd Wright).

The Cryogenic Engineering Conference and the International Cryogenic Materials Conference (CEC-ICMC) are the premier international conferences for discussion and presentation of research pertaining to the production and application of low temperatures.

The Cryogenic Engineering Conference focuses on the science and engineering required for cryogenic applications. Examples of topics in past conferences include liquefied gases for fuels, space applications of cryogenic liquids, cooling and performance of superconducting magnet systems in medical, transportation, power, and basic research applications, as well as the systems, machinery, control technology and thermodynamics required to produce low temperatures.

The International Cryogenic Materials Conference focuses on the development, characterization, fabrication and optimization of the materials used in cryogenic applications. This is typically broken into two broad categories: structural materials and superconducting materials. ICMC contributions cover both high and low temperature superconducting materials, from basic materials research through behavior of composite cables and wires in applications. Cryogenic structural materials cover a broad range, including non-metallic composites, polymeric resins and insulation materials, ferrous alloys, nickel-base alloys, aluminum alloys, and specialized materials for advanced cryocooler applications.

Every other year, these two conferences join together to form the CEC-ICMC Joint Conference. In 2001, the meeting place will be Madison, Wisconsin, USA. In 2003, the meeting will take place in Anchorage, Alaska, USA.

For more information on CEC-ICMC 2001, visit www.cec-icmc.org/main.html.

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IEEE POWER ENGINEERING WORKING GROUP ON SUPERCONDUCTIVITY T&D MEETS IN VANCOUVER IN JULY

The IEEE Power Engineering Working Group on Superconductivity T&D: Products, Common Applications and Analysis will meet from 12:00 p.m. to 2:00 p.m. on Monday, July 16 at the IEEE Power Engineering Society Summer meeting in Vancouver British Columbia. The meeting is scheduled to be held in the Constable Room of the Hyatt Regency.

For more information on this working group, contact Brian Johnson of the University of Idaho at 208-885-6902, or bjohnson@ece.uidaho.edu. For information on the 2001 IEEE Power Engineering Society Summer Meeting in Vancouver, visit www.ieee-spm2001.org/.

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ABOUT THIS UPDATE

The **High-Temperature Superconductivity News Update** is compiled by Bob Lawrence & Associates Inc. on behalf of the U.S. Department of Energy's Oak Ridge National Laboratory Superconductivity Program. It is issued periodically as events warrant. Past issues are available on the U.S. Department of Energy's website at www.eren.doe.gov/superconductivity/pubs.html.

Please let me know if you would like more information or story ideas on any of these news items involving high-temperature superconductivity---a clean and capable new electricity technology for the 21st century. If you have any other comments or questions, please let me know.

Thank you very much.

Craig Cox
Bob Lawrence & Associates, Inc.
www.bl-a.com
303-679-9331
coxcraig@att.net